

# Better Buildings Residential Program Solution Center

Danielle Sass Byrnett



# Agenda

- Overview
- Tour of Solution Center
  - Framework
  - Handbooks
  - Content through Examples
- Next Steps
  - Peer Review
  - Become a Beta User!
  - Future Enhancements





Better Buildings Residential Program Solution Center

Overview



# Purpose: No More Starting from Scratch



 Help residential energy efficiency programs minimize trial and error to achieve success.



 Help programs and partners plan, operate, and evaluate their programs.



 Provide a living repository of examples, lessons, and resources.





# Audiences: Programs & Partners

- Target audiences:
  - 1º Program Administrators and Implementers
    - utilities, state energy offices, municipal governments, NGOs
  - 2º Program and Service-Delivery Partners
    - contractors, financial institutions, marketing firms
  - 3º Program Evaluators







### **Development Timeline**

#### March - November 2012: Framework Development, Review, Consultation

Reviewed DOE guides, external literature, BBNP workshops and peer calls; vetted with stakeholders



#### **June - July 2012: Feedback from Key Partners & Intended Users**

Feedback from EE NGOs and programs, identified complementary work, REES conference input and ideas



#### July - October 2012: Drafted and Vetted Lessons Learned

Based on experience from 2 yrs of BBNP workshops and peer exchange calls, Now = Tips for Success



#### November 2012 - April 2013: Platform Development

Built platform, designed content format, developed selection of handbooks



#### April 2013 - April 2014: Content and Functionality Development (1st release)

All handbooks complete, additional Solution Center functionality developed



#### May 2014 – September 2014: 1st Release Available During Peer Review & Beta Testing

Tips for Success enhanced, content & function vetted by external peer reviewers; beta users test all aspects



#### Fall 2014: Public Launch (2<sup>nd</sup> release)

All content and functionality in place; ready for user submissions

# Solution Center Development Team

#### **Content Development**

- Market Position & Business Model
  - Subid Wagley (DOE)
  - Athena Bertolino (Ross Strategic)
  - Rebecca Foster (Vermont Energy Investment Corporation)
- Program Design & Customer Experience
  - Megan Billingsley (Lawrence Berkeley National Laboratory)
  - Tom Beierle (Ross Strategic)
  - Richard Faesy (Energy Futures Group)
- Evaluation & Data Collection
  - Dale Hoffmeyer (DOE)
  - Stacy DeGabriele (Eastern Research Group, Inc. ERG)
  - Nikki Kuhn (Vermont Energy Investment Corporation)
- Marketing & Outreach
  - Jonathan Cohen (DOE)
  - Kathleen Brady, Shannon Johnson (ERG)
- Financing
  - Steve Dunn (DOE)
  - Charlie Goff (ERG)
  - Matthew Brown, Dave Carey (Harcourt Brown & Carey)
- Contractor Engagement & Workforce Development
  - Megan Billingsley (Lawrence Berkeley National Laboratory)
  - Jennifer Tice, Darcy Peth (Ross Strategic)
  - Mike Rogers (OmStout Consulting)

#### **Editors**

- David Lee (DOE)
- Danielle Sass Byrnett (DOE)
- Amanda Chiu (Energetics Incorporated)

#### **Platform Development**

- Chrissi Antonopoulos (Pacific Northwest National Laboratory - PNNL)
- Michael Baechler (PNNL)
- Linda Connell (PNNL)
- Julia Walker (PNNL)





### **Diverse Content Sources**

- Content reflects the expertise and experience of:
  - Better Buildings Neighborhood Program grant recipients
  - Home Performance with ENERGY STAR Sponsors
  - EERE Technical Assistance Program
  - Guidance published by energy efficiency organizations about residential programming
  - Future: submissions by users











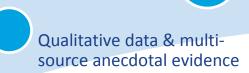






# Structured Criteria for Including Guidance and Examples

# **Evidence Progression**



Mature, fully supported, multi-source quantitative evidence

#### **Best Practice**

• *Coming in 2015* 

#### Lesson Learned

• Tips for Success & Step-by-Step

#### New, relatively untested

Step-by-Step

**Promising** 

**Approach** 

Anecdotal evidence

#### **Innovation**









### What You Are About to See

- Version 1 (beta) release
- Contains ~95% of expected content
- Includes ~90% of features & functionality
- Allows users to review content, test the tool, and provide comments
- We welcome your feedback through this session or email: BBRPSolutionCenter@erg.com

Version 2 (full) release expected in Fall 2014

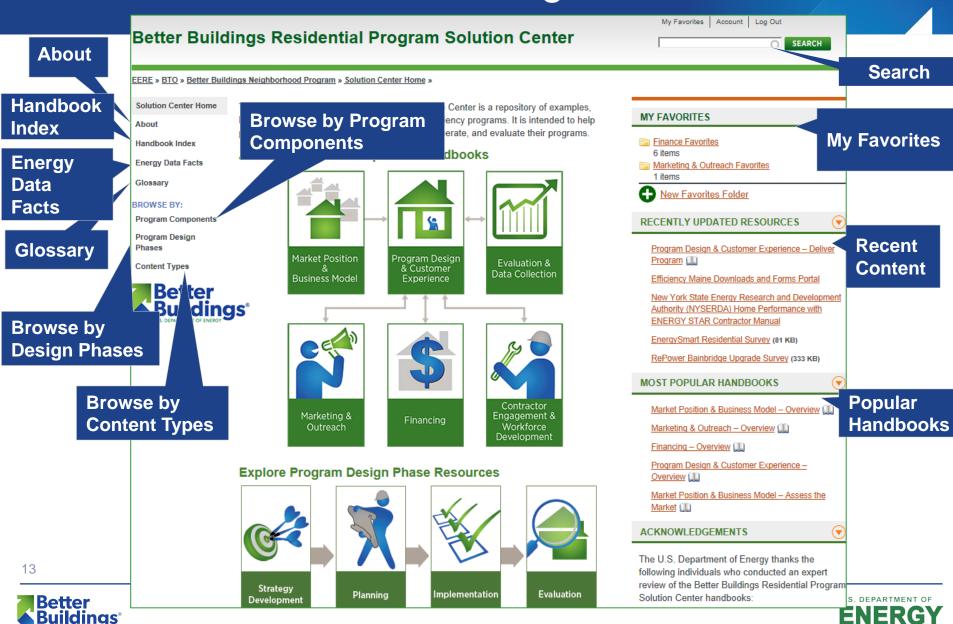




Better Buildings Residential Program Solution Center
Tour



# Solution Center Home Page



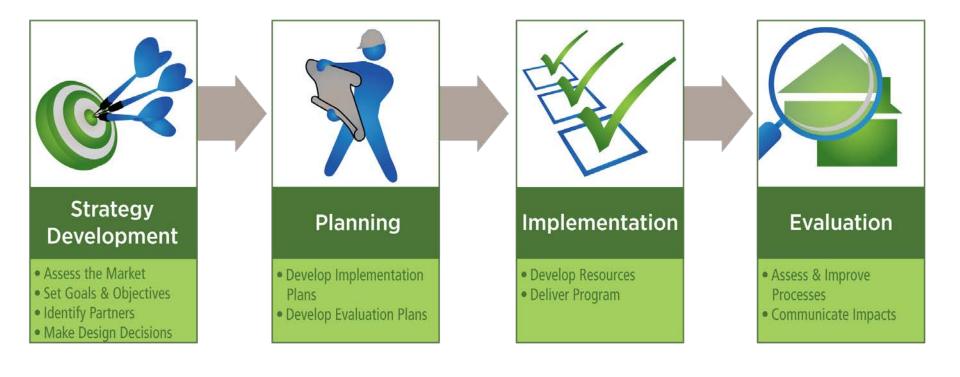
# Content: Six Program Components







# Content: Four Program Design Phases



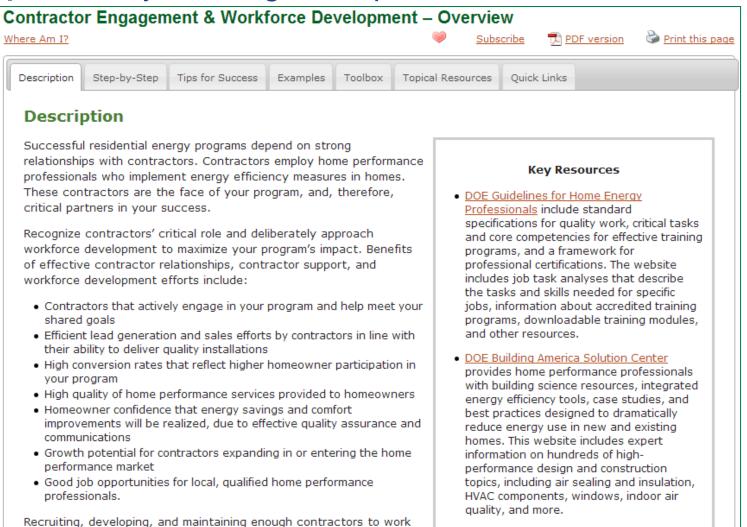




### 7 Tabs in Every Handbook

with your program requires ongoing effort. Leading programs engage

### **Description**: Why the stage is important and what user will learn







### Handbooks – Step-by-Step

#### **Step-by-Step**: Detailed *what* and *how* information



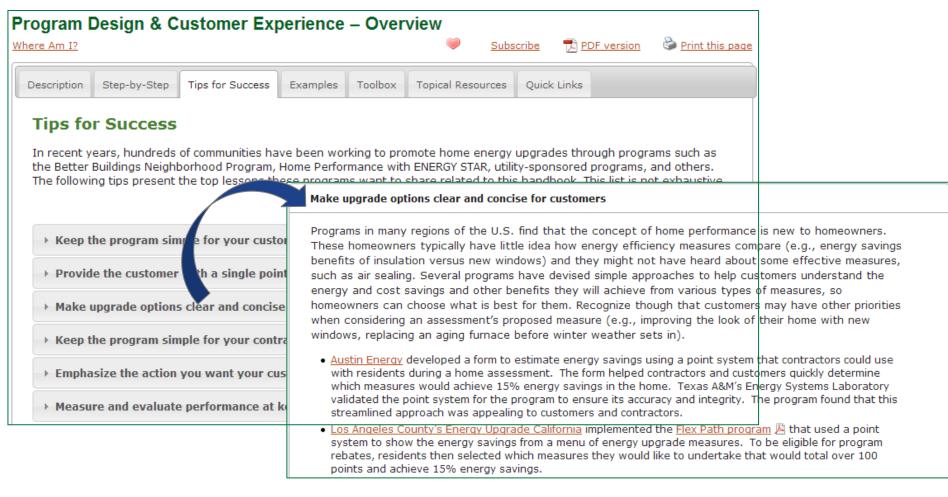
As your organization enters the residential energy efficiency market or expands its existing role, make sure you have a solid understanding of current and potential market demand for such services. A variety of factors can influence demand. Examples include:

- Local, state, and regional policies (e.g., energy disclosure requirements, utility energy efficiency targets) that promote energy efficiency.
  - The <u>DSIRE database</u> provides comprehensive information on state, federal, local, and utility incentives and policies that are in place to support renewable energy and energy efficiency.
  - The U.S. Department of Energy's (DOE) 2007 report <u>State and Regional Policies That Promote Energy</u>
     <u>Efficiency Programs Carried Out by Electric and Gas Utilities</u> (A describes policies that could promote cost effective programs, implemented by electric and natural gas utilities, to reduce energy consumption.
  - The <u>National Action Plan for Energy Efficiency</u> identifies key barriers limiting greater investment in costeffective energy efficiency, describes policy recommendations to overcome the barriers, and documents
    policy and regulatory options for greater attention and investment in energy efficiency. The <u>State and Local Energy Efficiency Action Network</u> builds on the Action Plan by focusing on the assistance that
    states and local governments need to advance policies and practices that will bring energy efficiency to
    scale.



# Handbooks – Tips for Success (1 of 2)

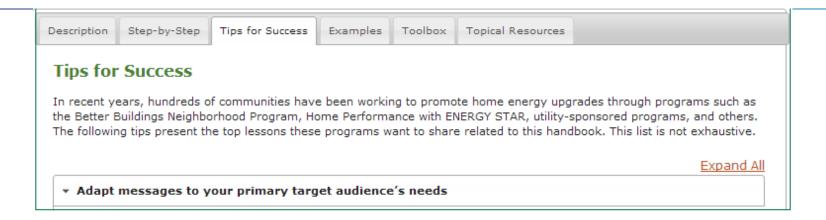
# **Tips**: Lessons based on documented experience from multiple programs







# Video Content (2 of 2)



In Their Own Words: Benefits of Market Segmentation



Source: U.S. Department of Energy, 2012.

In Their Own Words: Messaging to Motivate



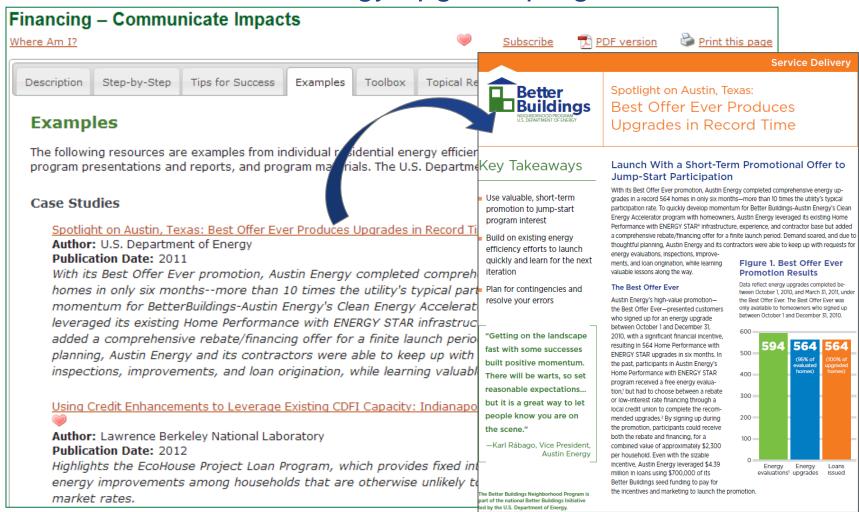
Source: U.S. Department of Energy, 2012.





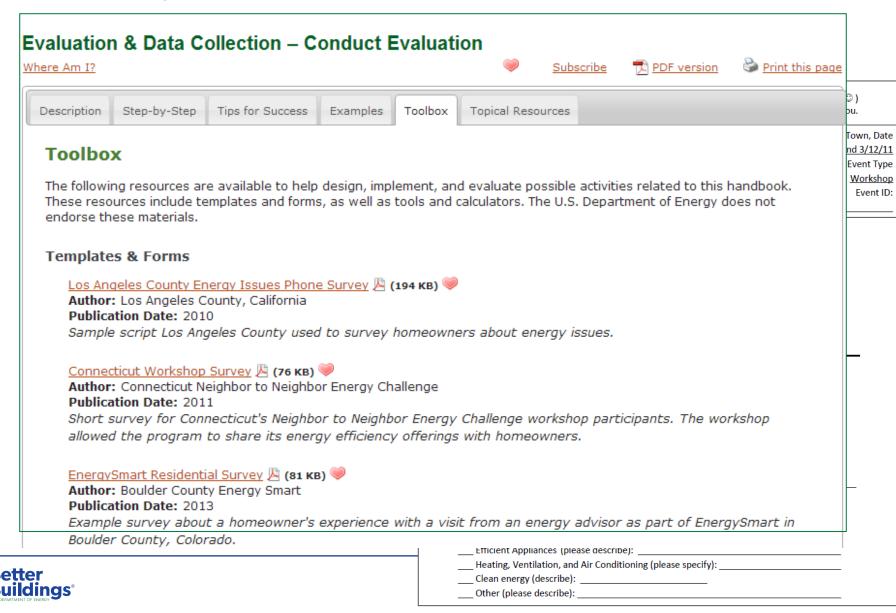
### Handbooks - Examples

# **Examples**: Case studies, program presentations and reports, materials from individual energy upgrade programs



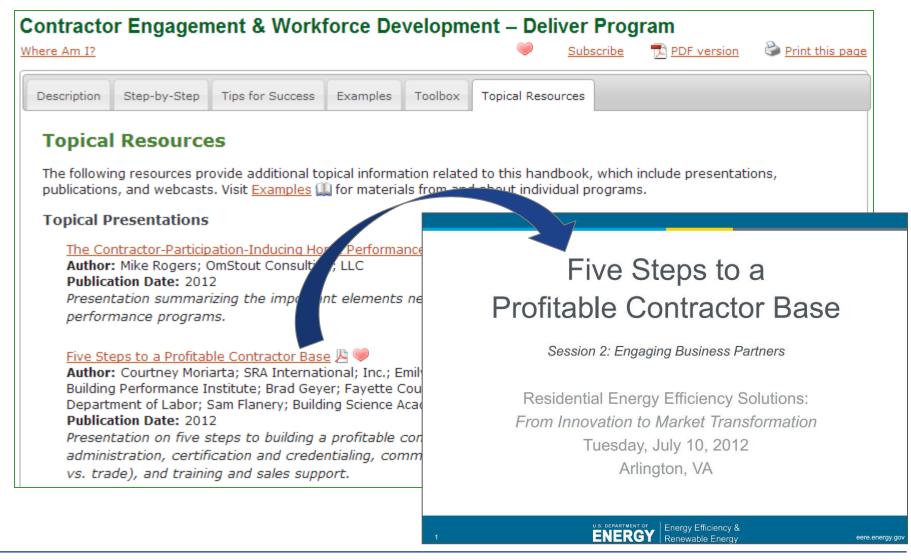
#### Handbooks - Toolbox

### **Toolbox**: Templates, forms, tools, calculators



### Handbooks – Topical Resources

### Topical Resources: Presentations, publications, webcasts

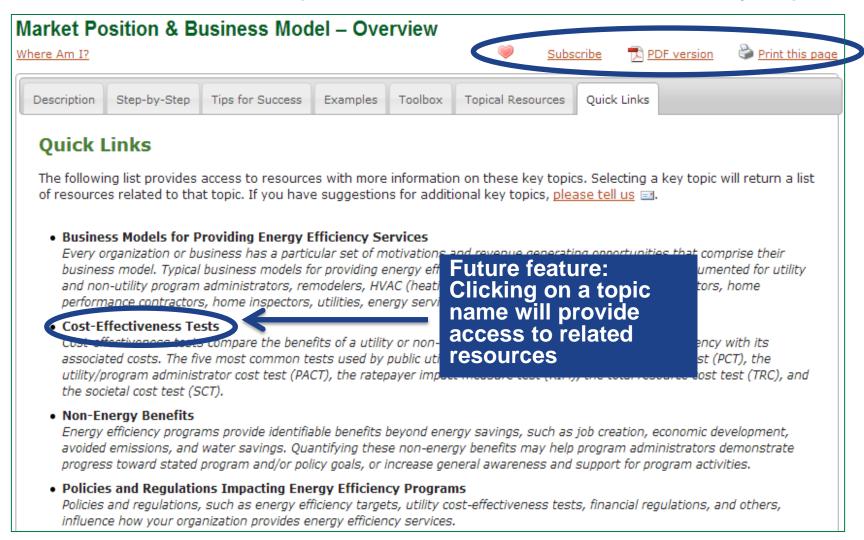






#### Handbooks – Quick Links

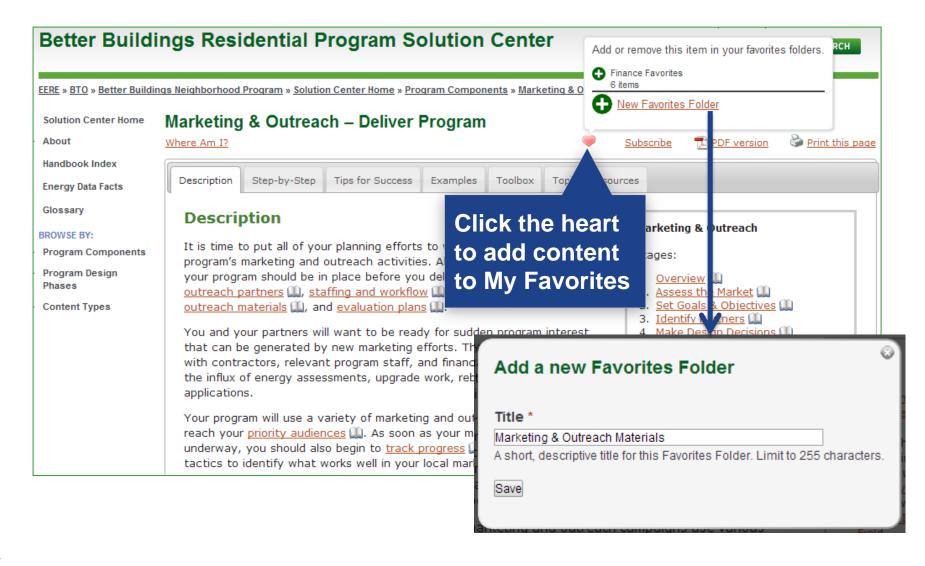
### Quick Links: Access to pre-coded search results on key topics







### Handbooks – My Favorites







#### Handbooks – Where Am I?

#### Where Am I: How the handbook fits into the Solution Center

Program Design & Customer Experience – Make Design Decisions Where Am I? nis page Program Design & Customer Experience – Make Design Decisions Step-by-Step Tips for Success Exampl Strategy Development - Assess the Market Set Goals & Objectives Degription - Identify Partners - Make Design Decisions - Develop Implementation Plans Successivenergy efficiency programs address - Develop Evaluation Plans opportunities, and challenges of their local m Implementation - Develop Resources likely to succeed aren't those that pick - Deliver Program options. Instead, you should develop a coordinate Evaluation - Assess & Improve Processes elements that are designed to overcome multiple m - Communicate Impacts the greatest fit of your program to your local conte your program is tailored to your specific market, yo on: Your <u>market assessment</u> (III), which identified need market. Your program will be designed to seize th overcome the barriers to adopting energy efficiency Your program goals and objectives (III), which defir seeks to achieve. Development Your partners who will help you deliver the pro understanding of local contractors and their capacitance local utilities. If your organization has a detailed business plan [[] program design. If your organization does not have a pusiness plan, you will make many or these types or planning decisions as you develop your program design. A business plan typically describes your organization's:





**Better Buildings Residential Program Solution Center** 

Examples



### Example #1 (1 of 7)

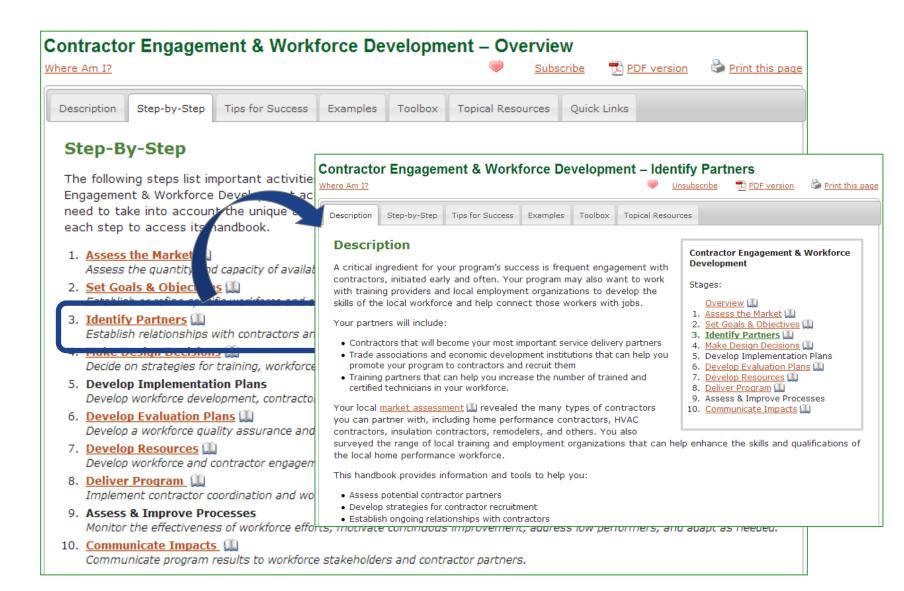
Our program needs contractors to perform upgrades. How do I identify and recruit contractors to develop a local workforce?







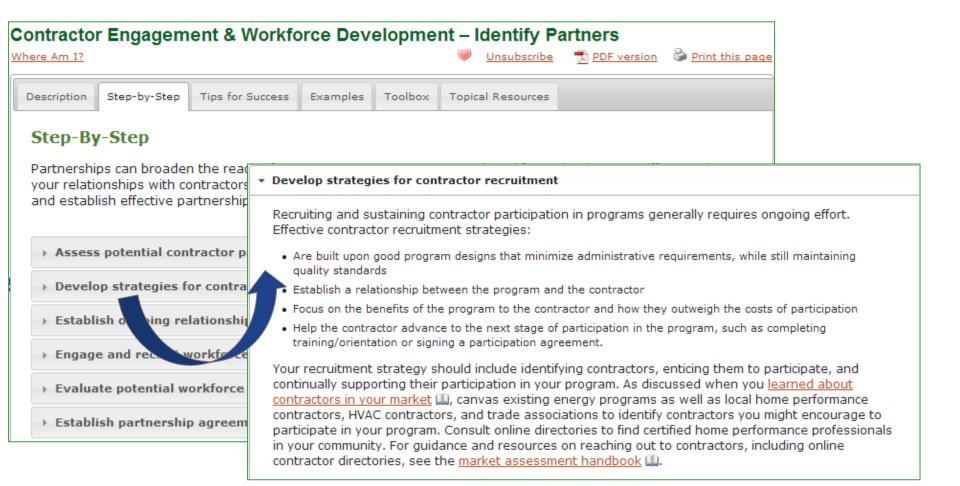
### Example #1: Contractor Engagement Overview (2 of 7)







# Example #1: Step-by-Step (3 of 7)







# Example #1: Tips for Success (4 of 7)

performance professionals.

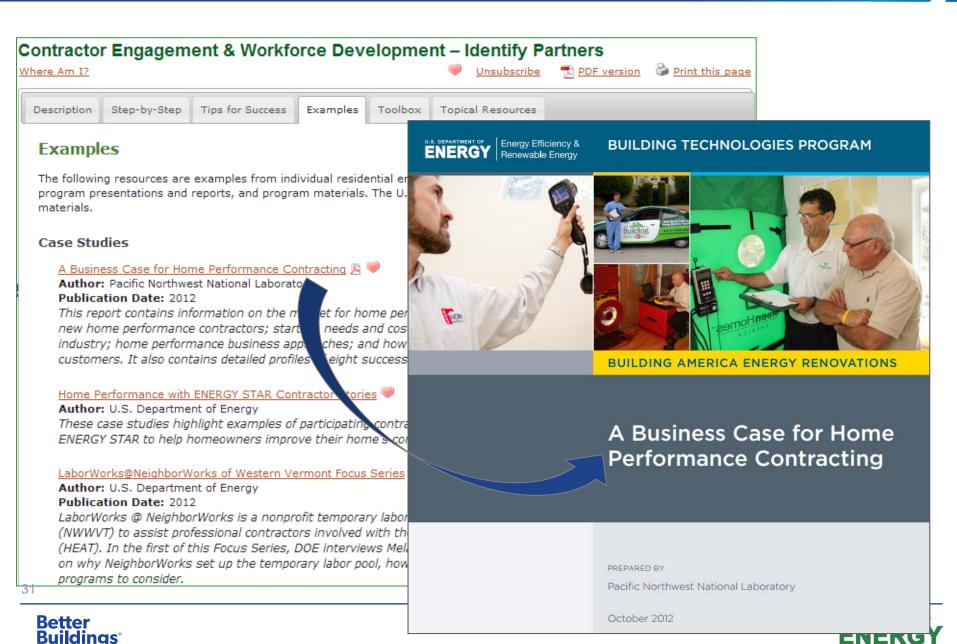
#### Contractor Engagement & Workforce Development – Identify Partners Where Am I? T PDF version Print this page Unsubscribe Step-by-Step Tips for Success Topical Resources Description Examples Toolbox Help contractors enter the home performance market by lowering barriers to entry and providing training, networking, and mentoring opportunities Tips for Success Entering a new market adds risk to contractors' businesses. As several Better Buildings Neighborhood In recent years, hundreds of commu Program partners focused on their efforts to attract contractors, they realized that it would be the Better Buildings Neighborhood Pr valuable for them to help contractors enter the home performance market. Many programs took steps The following tips present the top les to lower or eliminate unnecessary hurdles or barriers to contractors' successful entry into the market. These barriers included long delays to receive payment for the program, paperwork burdens that were sometimes excessive enough to make contractors reluctant to participate, and program Design a program that provi expectations that were unclear to contractors. Programs have also used equipment loan programs, subsidized training, and other strategies to lower the upfront costs of entering the home performance market. Establish collaborative partr To help contractors learn the trade and enter the home performance market, many programs have Help contractors enter the h offered training and mentoring. Taking steps to help contractors enter the home performance market training, networking, and me can help you establish a trained workforce of high-quality contractors to support home performance work. Fayette County, Pennsylvania helped contractors enter the market P by providing grants and financing to minimize startup costs, and by giving contractors the opportunity to provide Building Performance Institute (BPI) certification to their technicians. The program partnered with a local private industry council to train technicians to become BPI certified at no cost to students. The partnership program helped new home performance professionals start new businesses, for example, by providing grants and low-interest loans to purchase computer software and professional equipment. Training and certification in the home performance industry provides Fayette County residents with an opportunity for stable and well-paying careers. New Hampshire's Beacon Communities Project sought to reinvigorate the local economy of Berlin, New Hampshire, following the 2006 closure of a pulp mill. The program began working with local community colleges to provide BPI-certified training to develop more qualified home performance professionals. The

program supplemented the training with mentoring opportunities for students who completed classroom trainings but needed more experience in the field before being hired by a contractor or starting their own company. In the nearly three years since the program's launch in September 2013, 42 students had been trained through these classes and mentorships. These trained students helped the program offer quality home performance upgrades to homeowners, and the mentorship is helping students become qualified home





# Example #1: Examples (5 of 7)



### Example #1: Toolbox (6 of 7)

#### Contractor Engagement & Workforce Development – Identify Partners

Where Am I?





📆 PDF version



Print this page

Description

Step-by-Step

Tips for Success

Examples

Toolbox

Topical Resources

#### Toolbox

lable to help design, implem The following resources are a These resources include tem tes and forms, as well as too endorse these materials.

#### **Templates & Forms**

Efficiency Maine Residential Registered Vendor Agreeme

Author: Efficiency Maine Publication Date: 2014

A short, checklist-style form that contractors complete contractors to verify whether they meet basic program qualifications, and describe other information about th

#### **Tools & Calculators**

Green for All Energy Efficiency Toolkit \*

Author: Green For All Publication Date: 2012

This practitioner-focused Toolkit for Residential Energy assist new, established, and future energy efficiency p promise of the green economy. It is intended as a praa program manager can deploy to implement a variety summary documents, RFPs, contracts, and other prod nationwide have used to create their own efficiency or



#### **Residential Registered Vendor Agreement Form**

To be listed as a Registered Vendor on the Efficiency Maine website, please complete this form, sign it and submit it with the appropriate documentation.

#### Section 1: Registered Vendor Information. Please enter information you would like to appear on the website.

2	Business Name	Phone Number	
	Street Address	Fax Number	
1	City, State, Zip	Business Email	
7	Contact Name	Website	

#### Section 2: Basic Requirements. Please include the following documentation when submitting agreement form.

<b>√</b>	Required Documentation	
	Code of Conduct: http://www.efficiencymaine.com/docs/EMCode-of-Conduct.pdf	
	General Commercial or Professional Liability Insurance (Minimum coverage: \$500,000)	
	Workers Compensation Insurance (Minimum coverage: \$500,000)	
	Please Note: A Sole Proprietor without employees is not required to have Workers Compensation coverage. Similarly, a Limited Liability	
	Corporation without employees is not required to have Workers Compensation coverage for the owners. If your business is exempt from this requirement, please write "NA" in the checkbox to the left.	

#### Section 3: Service Offerings and Qualifications. To have the following services reflected on the Efficiency Maine Locator, please check the rows that apply and SUBMIT DOCUMENTATION OF APPLICABLE QUALIFICATION(S):

/	Service Offering	Qualification(s)*
	Energy Advisor	Building Performance Institute (BPI) Building Analyst AND Maine Limited
	<u> </u>	Energy Auditor Technician (LEAT) license
Air	Air Sealing and Assessment	Building Performance Institute (BPI) Building Analyst AND Maine Limited
	All Sealing and Assessment	Energy Auditor Technician (LEAT) license
	Insulation	Insulation installation training
		Environmental Protection Agency (EPA) Section 608 Refrigerant Handling
	Heat Pumps	Certification AND installation training within the last two years by a
		manufacturer of ENERGY STAR heat pumps
	Gas	Maine Fuel Board License (Master or Journeyman, Propane and Natural
	Gas	Gas Technician)
	0.11	Maine Fuel Board License (Master or Journeyman, Oil and Solid Fuel
	Oil	Technician)



# Example #1: Topical Resources (7 of 7)







### Example #2 (1 of 4)

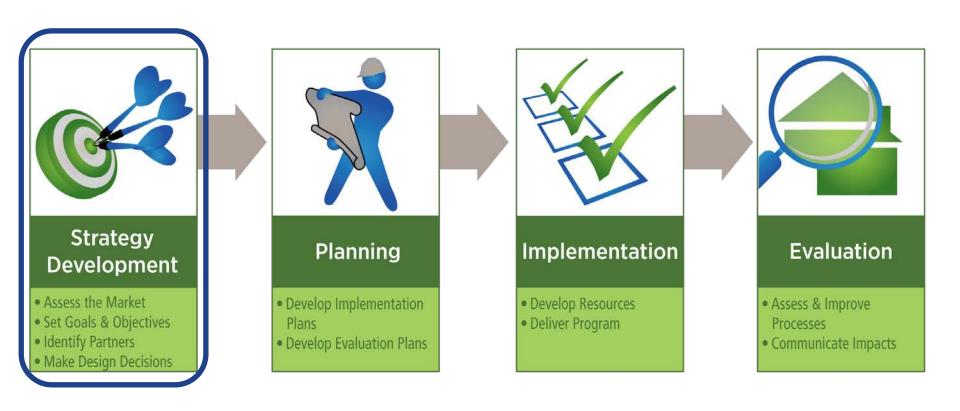
Our program is starting soon, and we need to research what the market for energy efficiency looks like in our community. What should I do to understand the market?







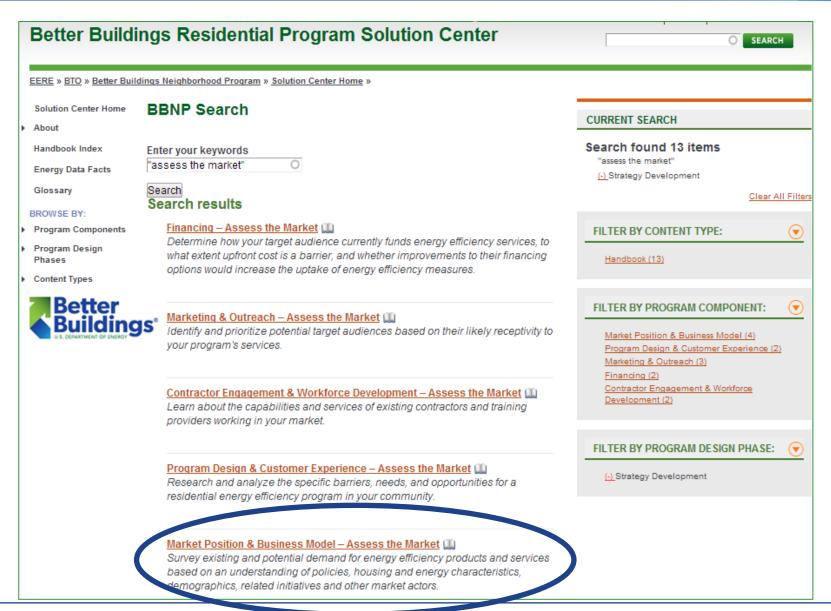
# Example #2: Program Design Phase (2 of 4)







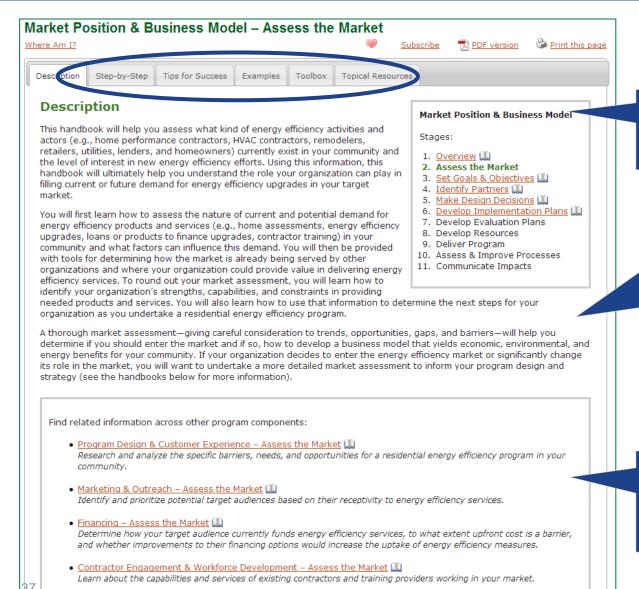
# Example #2: Strategy Development (3 of 4)







### Example #2: Handbooks (4 of 4)



Access Step-by-Step, Tips, and resources

General description of how to assess what kind of energy efficiency activities and actors exist in your community

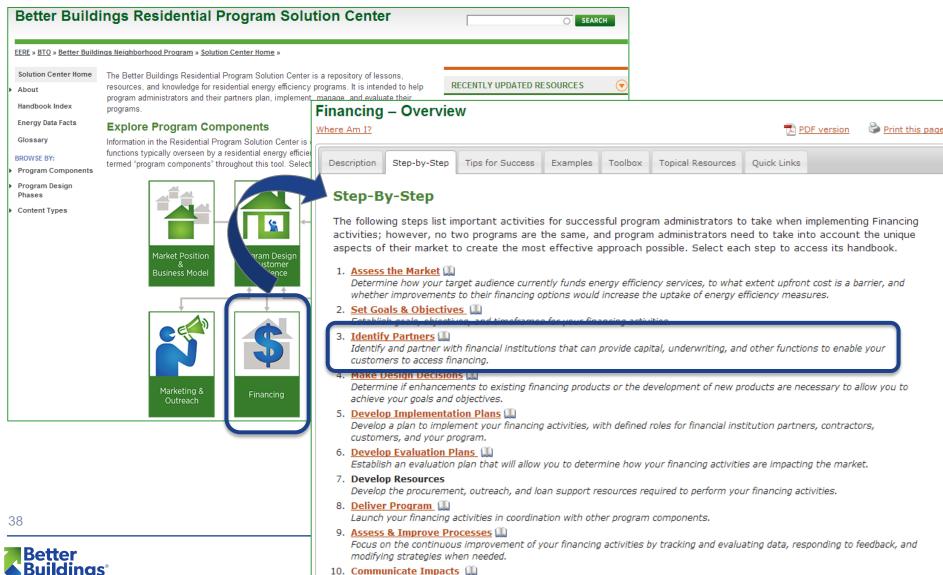
Access related information across all program components





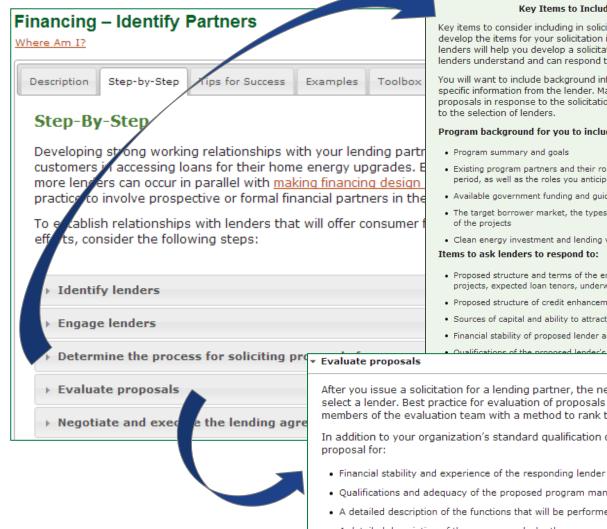
### Example #3: Homepage (1 of 3)

# How do I develop an RFP to procure the financing services that my customers need?



Communicate the results of your financing activities to internal and external partners.

### Example #3: Handbook (2 of 3)



#### Key Items to Include in Solicitations for Lending Partners

Key items to consider including in solicitations for lending partners are listed below. Do not develop the items for your solicitation in a vacuum; consultations with at least a few potential lenders will help you develop a solicitation that meets your program's needs and one that lenders understand and can respond to quickly with a proposal.

You will want to include background information about your program as well as requests for specific information from the lender. Make sure to define the prescribed format and content for proposals in response to the solicitation, and the rules, processes, and schedule that will lead

#### Program background for you to include:

- · Existing program partners and their roles over the full program development and implementation period, as well as the roles you anticipate for the lending partner
- · Available government funding and guidelines (if applicable)
- . The target borrower market, the types of energy efficiency projects to be financed, and the economics
- · Clean energy investment and lending volume targets

- · Proposed structure and terms of the energy efficiency loans, including eligible borrowers, eligible projects, expected loan tenors, underwriting quidelines, and proposed loan terms
- · Proposed structure of credit enhancements or revolving loan funds, including a risk-sharing formula
- · Sources of capital and ability to attract additional sources of funds
- Financial stability of proposed lender and experience with residential energy efficiency loans

After you issue a solicitation for a lending partner, the next task is to evaluate the proposals and select a lender. Best practice for evaluation of proposals is to develop a scoring sheet that provides members of the evaluation team with a method to rank the qualifications of bidders objectively.

In addition to your organization's standard qualification criteria, you should carefully evaluate the

- · Qualifications and adequacy of the proposed program manager and staff
- · A detailed description of the functions that will be performed by the lender
- A detailed description of the process and why the process will be acceptable to contractors
- . A detailed description of the IT and other systems that will support the process
- · A description of the method of compensation
- · Reporting capabilities
- · Quality control and quality assurance related to loan administration.



# Example #3: Resources (3 of 3)



#### Program Materials

Sample RFP: City of Independence, Missouri 🔑 (217 KE

Author: City of Independence, Missouri

Publication Date: 2010

A sample competitive procurement procedure to award lo

Sample RFP: Greensboro Energy Efficiency Loan Produ

Author: Better Buildings of Greensboro, North Carolin

Publication Date: 2011

A sample RFP from Greensboro, North Carolina, for energ

Description Step-by-Step Tips for Success

#### Templates & Forms

Financing Program Goals and Degran Template Present

Author: U.S. Department of En

Publication Date: 2011

Template for program administrate to fill out to help det

DOE Template Financial Institution RFP 🔑 (659 KB)

Author: U.S. Department of Energy

Publication Date: 2010

A template competitive procurement procedure to award in

#### [INSERT GRANTEE LOGO]

[NOTE: Numbers and any fictional names are used for illustrative purposes]

Proposal Due Date: September X, 2010 at XX:00 a.m.

Send Proposals to: City of [

Office of Sustainability

789 Main St

[City], [State] 19890

If you have questions about this RFP, please contact:

 Lead Contact for RFP
 Cary S. Ford, Projects Manager

 Questions & Communications:
 800-123-4567, CFord@City.gov

#### 1. Request for Proposals ("RFP")

Based on a grant from the [ ] State Energy Fund ("SEF"), the City of [ ] (the "City") is seeking a financial institution (FI) partner to participate in its city-wide energy efficiency initiative ("Program"). We are requesting proposals from FIs to provide the following services:

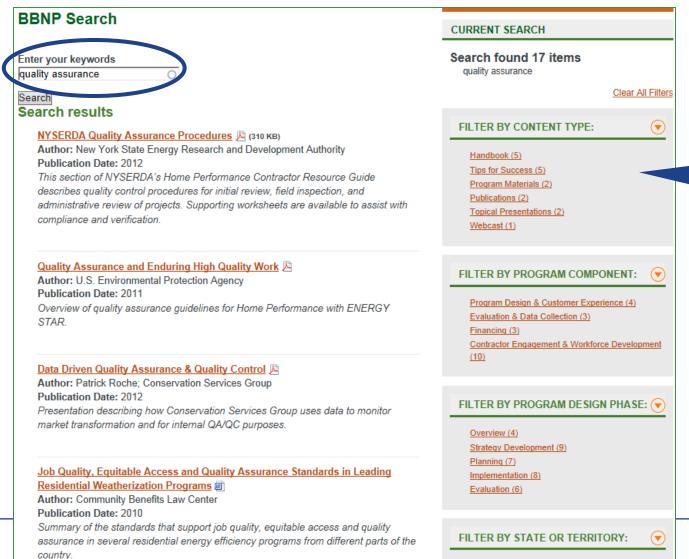
- assist in final structuring of the energy efficiency loan program, in collaboration with the City and its financial advisor, Energy Finance Corp. ("EFC");
- originate and provide energy efficiency ("EE") loans ("Loans") to residential energy users (and, possibly in the future, small commercial and non-profit energy users);
- manage a loan loss reserve fund ("LRF"), or other credit enhancement mechanism (see Section 5), funding for which shall be provided by the City to enhance the credit structure of the Loan portfolio;
- · provide related Loan administration services, e.g., billing and collections; and
- provide reports on the Loan portfolio and LRF.





### Example #4 (1 of 2)

# I need to explore options for setting up a quality assurance program. Where do you talk about that?



Use filters to further refine results



# Example #4: Filter for Handbooks (2 of 2)

#### **BBNP Search**

Enter your keywords

quality assurance

Search Search results

#### Contractor Engagement & Workforce Development – Overview (1)

Support and partner with the workforce who will deliver your program's energy efficiency services by understanding their capacity, recruiting contractor partners, enabling technical training and business development support, fostering clear communication, and refining program processes over time, in partnership with your workforce.

# BETTER BUILDINGS U.S. DEPARTMENT OF ENERGY

Quality Assurance Best Practices

#### Quality Assurance Best Practices: Home Performance with ENERGY STAR Programs

While the EPA's Home Performance with ENERGY STAR is not the only whole house retrofit program in operation, it offers a set of standard guidelines and best practices for Quality Assurance (QA) that should be utilized in starting any new or updating existing home retrofit programs.

In order to sponsor a Home Performance with ENERGY STAR program, organizations must submit an implementation plan which includes Quality Assurance protocols. In order to meet ENERGY STAR requirements, QA plans must explain how the program will ensure participating contractors will meet program standards. QA plans must explain:

 Contractor company and staff qualification requirements intended to ensure that qualified building scientists are assessing the home and are capable of protecting the brand promise of ENEDGY STAR. These capabilities include:

Energy Efficiency & contractor staff understand how to represent the program and their participation in Renewable Energy

contractor staff understand the energy efficiency strategies applicable for residential retrofits

contractor staff can protect the health and safety of occupants when installing energy efficiency measures

Contractor companies have proper licenses, insurance, etc.

ontractor companies sign participation agreements that outline proper conduct and program requirements

<u>ig process</u> that requires participating contractors to report jobs that are promoted owners and performed under the HPwES logo.

ome - but not all - programs want to pre-approve jobs prior to commencement.
However, this pre-approval tends to slow down jobs and can potentially reduce the
hudit-to-retrofit conversion rate.

compliance with program requirements and industry standards (see below)

rt review process
that ensures program compliance and provides for follow-up
contractor when necessary

Reporting of jobs (aka "file checks") serve multiple purposes:

- Rebate processing (i.e., eligibility of installed measures)
- Sufficient data to have some reasonable assurance that measures will save energy
- Confirmation that health & safety measures were being followed
  - Combustion safety draft test, Combustion Appliance Zone (CAZ) tests
  - Ventilation ASHRAE compliance
  - Lead safe practices
  - Other (moisture, asbestos, etc.)
  - Data that could be used to inform an on-site QA visit
- Opportunity to mentor contractors



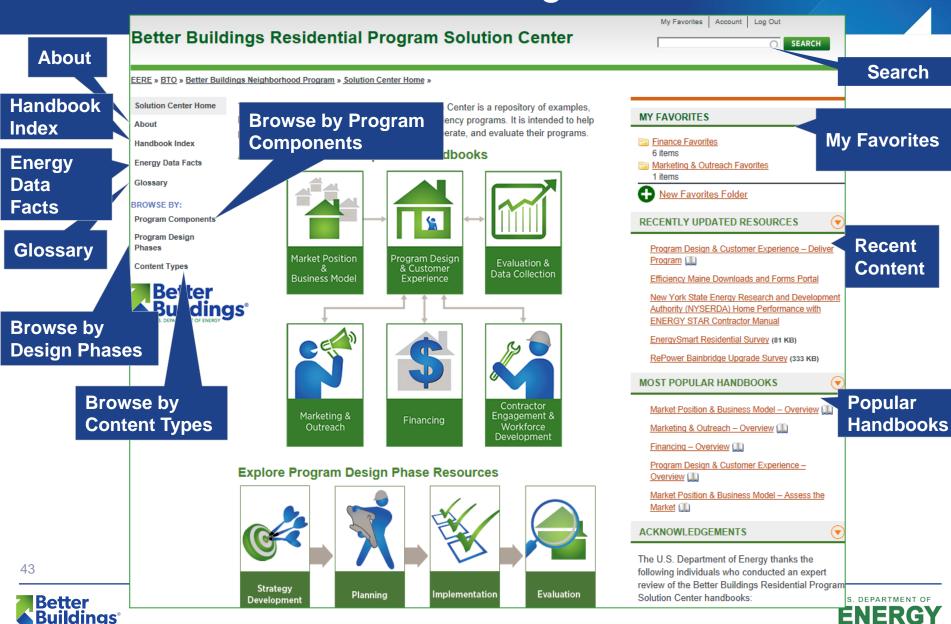
ENERGY

Quality Assurance for Residential Retrofit Programs

#### Jim Grevatt

Vermont Energy Investment Corporation
DOE Technical Assistance Program
Team 4 – Program & Project Development & Implementation

# Solution Center Home Page



Better Buildings Residential Program Solution Center
Next Steps



### Summer 2014: Peer Review & Beta Use

- Peer reviewers will comment on technical validity, market relevance, and framing
- Beta User access:
  - https://bbnp.pnnl.gov/
  - Username: betauser
  - Password: bbrpsc
- Create a user account to customize experience
- Get involved!
  - Sign up to become a beta user now or email: BBRPSolutionCenter@erg.com





### Access the Solution Center



### Access information:

- https://bbnp.pnnl.gov/
- Username: betauser
- Password: bbrpsc

Email comments about the Solution Center to: BBRPSolutionCenter@erg.com

